

**Identification and Synonymies of Two Western Palearctic
Cerceris: maculata Radoszkowski and *hathor* n. sp.
(Hymenoptera: Sphecidae)**

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The identities of *Cerceris orientalis* Mocsáry and *haematina* Kohl have been a problem for hymenopterists because their original descriptions were inadequate and the types could not be found. This paper presents the results of my study of these problems and is dedicated to the anniversary of Dr. R. M. Bohart. I sincerely thank Arnold S. Menke for discussing various aspects of the study, and Mary Ann Tenorio for drawing the figures.

***Cerceris maculata* Radoszkowski**

Cerceris maculata Radoszkowski, 1877:57, ♀. Holotype ♀: Uzbek SSR: Kyzil Kum Desert (Zool. Mus. Moscow Univ.).—Shestakov, 1918:141.

Cerceris orientalis Mocsáry, 1883:47, ♀. Holotype ♀: "Russia mer.-orient." = Kazakh SSR, not Caucasus (lost, see below). **Neotype:** holotype of *Cerceris maculata* Radoszkowski, present designation. Nec F. Smith, 1856. **New synonym.**

Cerceris eugenia Schletterer, 1887:390, new name for *Cerceris orientalis* Mocsáry, 1883.—Shestakov, 1918:131; Kazenas, 1978:58.

Cerceris Moscaryi Kohl, 1888:139 (incorrect original spelling), new name for *Cerceris orientalis* Mocsáry, 1883.—Schletterer, 1889:890; ? Shestakov, 1918:146 (as *mokzaryi*).

Cerceris haematina Kohl, 1916:111, ♀. Holotype ♀: origin unknown (lost, see below). **Neotype:** holotype of *Cerceris maculata* Radoszkowski, present designation. **New synonym.**

Diagnosis.—The female of *maculata* can be distinguished from other members of the *bupresticida* species group by the roundly triangular lamella of sternum V. The male can be recognized by the absence of micropunctuation on the frons adjacent to the frontoclypeal suture between the subantennal sclerite and tentorial pit. See the description of *hathor* for further details.

Nomenclature.—The correct interpretation of *eugenia* and *haematina* is particularly difficult because the original descriptions are inadequate, and the type material is apparently lost. As Dr. M. Fischer kindly informed me in his letter of 16 November 1981, no specimen named *eugenia*, *haematina*, or *orientalis* can be found in the Naturhistorisches Museum, Vienna, a situation already partly reported by de Beaumont (1951b:340). A specimen thought to be the holotype of *orientalis* Mocsáry, housed at the Hungarian National Museum, Budapest, was kindly submitted to me by Dr. J. Papp. It bears a handwritten label "*Cerceris mocsaryi* Kohl, *orientalis* Mocsary" in Mocsáry's handwriting, but no locality label. It is a female of *fischeri* (see below) and is apparently the specimen studied

Table 1. Comparison of presumed holotype of *orientalis* Mocsáry (Hungarian National Museum, Budapest) with original description (1883).

Body part	Specimen from Budapest	Mocsáry, 1883 description
1. Scape	all yellow	black basodorsally
2. Clypeal apex	brownish, truncate	black, crenulate
3. Tergum II	yellow basally	yellow laterally
4. Tergum IV	black	yellow posteriorly and laterally
5. Tibiae	all yellow	yellow, darkened mesoventrally

by Schletterer (1887, 1889) and by Kohl in 1888 (Kohl, 1888:139, 1916:111) and regarded by them as Mocsáry's holotype. Actually, it cannot be the true holotype of *orientalis*, because it differs significantly from the original description, as shown in Table 1.

The discrepancy in the color of terga II and IV is particularly striking and I doubt that Mocsáry would have made such an error. Schletterer redescribed *orientalis* twice: in 1887 under the replacement name *eugenia* Schletterer, and in 1889 under the replacement name *mocsaryi* Kohl. As Kohl (1888) pointed out, Schletterer's 1887 redescription was based on a specimen not conspecific with the holotype. The same must now be said about his 1889 redescription: it clearly indicates a specimen different from the material Mocsáry (1883) had before him, and it well agrees with the specimen labelled *orientalis* received for study from the Hungarian National Museum. This suggests that the holotype of *orientalis* was confused by Schletterer with two other specimens, so that a total of three must have been involved: 1. the holotype of *orientalis* (its possible fate is discussed below), 2. an Egyptian female of *hathor* on which Schletterer (1887) based his description of *eugenia* (now lost, see also under *hathor* below), and 3. a female of *fischeri* which Kohl (1888) and Schletterer (1889) regarded as the holotype of *orientalis*, on which they based their redescriptions of *mocsaryi*, which was then returned to Budapest as the holotype of *orientalis*, and which finally was submitted to me.

It is also very probable that the holotype of *haematina* Kohl was the misplaced holotype of *orientalis* Mocsáry. Descriptions of these two species show an almost identical set of characters, including the characteristic lateral spots on tergum II. The original locality or area of *haematina* is unknown, and the holotype of *orientalis* had no origin label, a coincidence which also suggests that the same specimen may have been involved. Most probably, the true holotype of *orientalis* was kept unrecognized in the Vienna Museum while the supposed false holotype was returned to Budapest after publication of Schletterer's monograph (1887, 1889). When casually discovered by Kohl (1916) many years later, it was then described by him as *haematina*.

According to the original description, the holotype of *orientalis* originated from "Russia meridionalis vel Caucasus." However, this origin is corrected to "Russia mer.-orient." in Mocsáry's characteristic handwriting in a reprint of the original paper (a xerox copy kindly sent by Dr. J. Papp). "Russia mer.-orient." of Mocsáry is almost certainly today's Kazakh SSR.

Several characters given in Mocsáry's original description help in recognition

of *orientalis*: clypeus convex (without discal process), with crenulate free margin; propodeal enclosure unsculptured; propodeum and gastral tergum I reddish; tergum II with lateral spots; terga III–V fasciate (fasciae broadened laterally). These characters suggest that *orientalis* is identical to *maculata*. I have seen the holotype and four additional females of *maculata* (three of them kindly sent by Dr. V. L. Kazenas, Alma Ata). None is identical in coloration to the holotype of *orientalis*, but the observed variation of the latter strongly suggests that they are conspecific with it. For example, the propodeum in the specimens studied is all black, or with small red spots, or largely red. Gastral tergum II has an oblong, yellow, lateral spot or the yellow covers the whole tergum except a semilunar apicomedian area (as in the holotype of *maculata*). There is little doubt that many specimens of *maculata* have exactly the same coloration as Mocsáry's holotype. Because of the observed variation, I designate the holotype of *maculata* as the neotype of both *orientalis* and *haematina*, even if the yellow area of tergum II is larger in the first than indicated in the descriptions of the latter two. This decision will end a complex nomenclatorial problem.

Cerceris fischeri Spinola

Cerceris fischeri Spinola, 1839:493, ♀, ♂. Syntypes: Egypt (Inst. Zool. Univ. Turin), see de Beaumont, 1951a:175.

Cerceris mocsaryi: Kohl, 1888:139; Schletterer, 1889:890.

The specimen which Kohl (1888) and Schletterer (1889) erroneously regarded as the holotype of *orientalis* Mocsáry and which they redescribed under the name *mocsaryi* Kohl (see above) is a female of *fischeri*, a member of the *rybyensis* species group of de Beaumont (1951b). The female of *fischeri* can be recognized by the following combination of characters: propodeum around enclosure impunctate or with a few scattered, punctures; and sternum V prominent posterolaterally. The male can be recognized by the presence of a well defined, basal platform on sternum II combined with acutely angulate posterolaterally sternum VI. Subsidiary recognition features of both sexes are: hypoepimeral area carinate below, propodeal enclosure unsculptured.

Cerceris hathor Pulawski, NEW SPECIES

Cerceris eugenia: Schletterer, 1887:390; Kohl, 1888:139, 1916:111; de Beaumont, 1951a:180, 1951b:339, 1953:122, 1956:186, 1958:59; de Beaumont and Bytinski-Salz, 1959:122; Pulawski, 1964:73.

Cerceris tricolorata: Mochi, 1938:190; Giner Marí, 1941:174.

Cerceris vidua: Honoré, 1941:150, 1942:69.

Etymology.—Hathor, a goddess of ancient Egyptians, in apposition.

Nomenclature.—As Kohl (1888) pointed out, Schletterer (1887) examined the holotype of *Cerceris orientalis* Mocsáry and renamed the species *eugenia*, but his description was based on a specimen belonging to a different species. Kohl (1888) and also de Beaumont (1951b) applied the name *eugenia* to this latter species, but Article 72(d) of the Code is clear: the replaced name (*orientalis*) and the replacement name (*eugenia*) must have the same holotype. This means that the species described by Schletterer under the name *eugenia* must bear a different name.

Schletterer (1877) mentioned two geographic areas in which *eugenia* supposedly occurs: southeastern Russia (= present Kazakh SSR) and Egypt. Since the holotype of *eugenia* originated from the first area, his description must have been based on an Egyptian specimen. Even though the latter was subsequently lost, de Beaumont (1951b) was able to recognize and to characterize (as *eugenia*) the species to which it belonged. The species has no available name and is here described as *hathor*.

Systematics.—*Cerceris hathor* is a member of the *bupresticida* species group of de Beaumont (1951b). The group, redefined by Krombein (1981), includes the following species:

bidentula Maidl, 1926; southern India, Sri Lanka, Thailand, Malaya, Celebes
(= *langkasukae* Pagden, 1934)

ssp. *bidentula spiniventris* Tsuneki, 1963; Thailand

bupresticida Dufour, 1841; Mediterranean basin, Transcaspia, Afghanistan

hathor Pulawski, n. sp.; North Africa, Israel, Azerbaidzhan

kokuevi Shestakov, 1912; Transcaspia

(= *egregia* Kazenas, 1977, according to V. L. Kazenas's identification labels)

maculata Radoszkowski, 1877; Transcaspia

(= *eugenia* Schletterer, 1887, *haematina* Kohl, 1916)

mastogaster Smith, 1856; India, Sri Lanka

odontophora Schletterer, 1887; Balkans, Turkey, Iran, Transcaspia

palmetorum de Beaumont, 1951; North Africa

supposita Kohl, 1916, as interpreted by Kazenas, 1978 (perhaps not conspecific with the holotype of *supposita*); Transcaspia

tricolorata Spinola, 1839; North Africa

This list may be incomplete, and other described species, especially Oriental and Ethiopian, may belong here. Some of the species listed above are insufficiently known, and some were unavailable for comparison during this study. My interpretation of *supposita* and *kokuevi* is based on specimens so labelled and kindly sent to me by Dr. V. L. Kazenas.

Diagnosis.—The female of *hathor* can be recognized by the combination of: propodeum sparsely punctate, sternum V nondentate posterolaterally, and lamella of sternum V evenly arcuate. The shape of gastral segment VI is the same in males of *hathor*, *maculata* and *odontophora*: its sternum is dentate posterolaterally, and its tergum is not. Unlike *maculata*, the face in males of *hathor* is densely micro-punctate including the area above the frontoclypeal suture, and unlike *odontophora*, the propodeum is sparsely punctate outside the enclosure.

Comparative description.—At least some punctures of the propodeal dorsum around enclosure are about 1 diameter apart (punctures compressed against each other in *bidentula spiniventris*, *bupresticida*, and *odontophora*, and in some males of *maculata*). Hindcoxa with medioventral carina (carina absent in *kokuevi* and *palmetorum*). Gastral sternum II with indistinctly delimited basal platform (similar platform present in *kokuevi*, *maculata*, *mastogaster*, *supposita*, and female of *bidentula spiniventris*; platform absent in *bupresticida*, *odontophora*, *tricolorata*, and male of *bidentula spiniventris*). Thorax black or partly red, but tegula and in most populations also pronotum and metanotum pale yellow (metanotum black

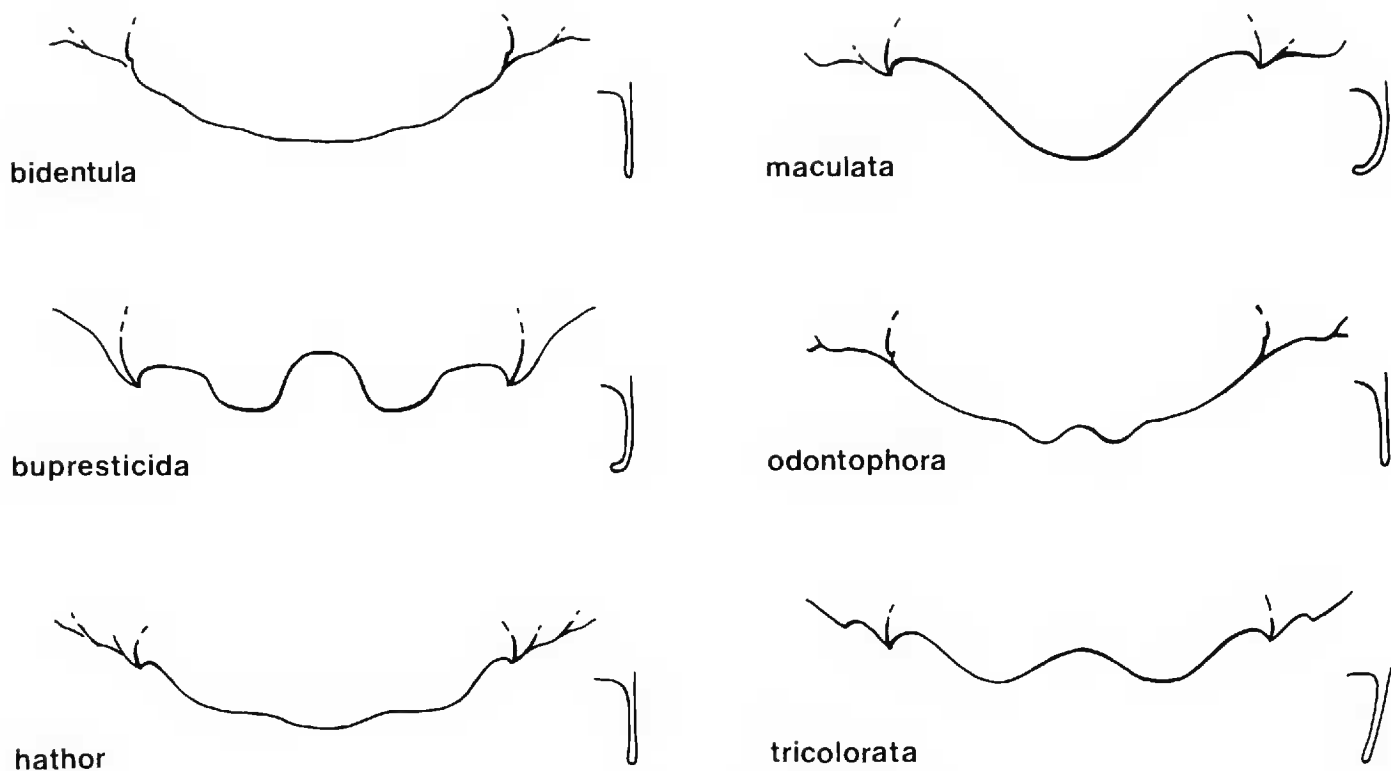


Fig. 1. Species of *Cercheris*. Ventral view of female sternum V showing apical outline. Small drawing to right of each illustration shows cross-section profile of sternal apex.

in *odontophora*, mesoscutum and propodeum partly to all yellow in *kokuevi* and *palmetorum*).

Female.—Clypeal middle section with two admedian tubercles near free margin (tubercles absent in *tricolorata*). Sterna III–V without sublateral process (process present in *mastogaster*: Krombein, 1981). Gastral sternum V (Fig. 1) tuberculate posterolaterally (similarly in *odontophora* and *tricolorata*, angulate in *maculata* and *supposita*, dentate in *bidentula spiniventris*). Apicomedian lamella of sternum V evenly rounded, its midlength less than its width (lamella almost identical in *bidentula spiniventris*; with semicircular notch in *bupresticida*; roundly triangular in *maculata*; strong, erect, triangular in *mastogaster*: Krombein, 1981; semicircular, shallowly notched apically in *odontophora*; trapezoidal, with width about twice length in *supposita*; with widely concave free margin in *tricolorata*). Lateral carina of tergum VI not expanded (expanded at midlength in *supposita*).

Male.—Face with large punctures and numerous micropunctures between tentorial pit, antennal socket and orbit (micropunctures indistinct in *bidentula spiniventris*, absent adjacent to frontoclypeal suture in *maculata* and *supposita*). Gastral terga I and II not elongate: spiracles of tergum I closer to tergal hindmargin than to each other (terga I and II elongate in *bidentula spiniventris* and *tricolorata*: spiracles of tergum I about equidistant from each other and tergal hindmargin). A spine-like, posterolateral projection present on sternum VI, but absent from tergum VI (similar in *maculata* and *odontophora*; projection absent on tergum and sternum in *kokuevi* and *palmetorum*; and present on tergum and sternum in *bidentula spiniventris*, *bupresticida*, *mastogaster*, and *tricolorata*).

Geographic distribution.—Desert habitats of North Africa and Israel, probably also Azerbaidzhan SSR.

Material examined.—Holotype ♀: EGYPT, Ghiza near Cairo, 20 Apr. 1958, W. J. Pulawski collector (W. J. Pulawski collection). Paratypes: EGYPT, Kom

Oshim on Ghiza-Fayum road, 19 April to 13 May 1958, same collector and depository (1 ♀, 4 ♂).

Literature records.—MOROCCO: Midelt (de Beaumont, 1951b, 1953). ALGERIA (de Beaumont, 1951, 1958): Biskra, Laghouat, Tadjemout, Tassili des Ajjer (Oued Ténéouène, Oued Ti'Harat). CHAD: Tibesti: Zouarke (de Beaumont, 1956). EGYPT: Ghiza near Cairo, Kom Oshim on Cairo-Fayum road (Pulawski, 1964), Gebel Asfar near Cairo (Honoré, 1941). ISRAEL (Negev Desert): Beer-sheba, Gvulot, Kfar Yeroham, Revivim (de Beaumont and Bytinski-Salz, 1959). AZERBAIDZHAN SSR: Adzhikend (Kohl, 1916).

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